Contents of Volume 8, 1996/1997

Vol. 8 No. 1 1996

H. Takenaka, Y. Yamaguchi, S. Teramoto, N. Tanaka, M. Hori, H. Seki & T. Hiwatari / Evaluation of the mutagenic properties of the coccolithophore *Pleurochrysis carterae* (Haptophyceae) as a potential human food supplement 1–3

C.J.S. Bolch & S.I. Blackburn / Isolation and purification of Australian isolates of the toxic cyanobacterium *Microcystis aeruginosa* Kütz. 5–13

Feng Chen & M.R. Johns / Relationship between substrate inhibition and maintenance energy of *Chlamydomonas reinhardtii* in heterotrophic culture 15–19

M. Friedlander, Y. Gonen, Y. Kashman & S. Beer / *Gracilaria conferta* and its epiphytes: 3. Allelopathic inhibition of the red seaweed by *Ulva* cf. *lactuca* 21–25

R. Perez-Enriquez / Growth of *Eucheuma isiforme* (C. Agardh) J. Agardh on experimental rats off the coast of Yucatan State, Mexico 27–28

M. Zinoun & J. Cosson: Seasonal variation in growth and carrageenan content of *Calliblepharis jubata* (Rhodophyceae, Gigartinales) from the Normandy coast, France 29–34

A. Vonshak, L. Chanawongse, B. Bunnag & M. Tanticharoen: Light acclimation and photoinhibition in three *Spirulina platensis* (cyanobacteria) isolates 35–40

R.J. Lewis & M. D. Hanisak: Effects of phosphate and nitrate supply on productivity, agar content and physical properties of agar of *Gracilaria* strain G-16S 41–49

N.W. Ross & S.S. Bates: Electro-immunoblotting characterization of *Pseudo-nitzschia multiseries* and *P. pungens* antigens recognized by antibodies directed against whole cells 51–58

Chor Koon Tan & M.R. Johns: Screening of diatoms for heterotrophic eicosapentaenoic acid production 59–64

J.A. van der Heever & J.U. Grobbelaar: Evaluation of a short-incubation-time small-volume radiocarbon-uptake algal toxicity test 65–71

J.G. Day & A.J. Tsavalos: An investigation of the heterotrophic culture of the green alga *Tetraselmis* 73–77

Gene bulletin

R.M. Cranenburgh & N.J. Robinson: Phenylalanyl-tRNA synthetase gene, *pheT*, from *Synechococcus* PCC 7942 81–82

Book reviews 83–84

Acknowledgement 85

Announcement 86

Vol. 8 No. 2 1996

L. Lazo & A.R.O. Chapman / Effects of harvesting on *Ascophyllum nodosum* (L.) Le Jol. (Fucales, Phaeophyta): a demographic approach 87–103

A.Q. Hurtado-Ponce, R.F. Agbayani & E.A.J. Chavoso / Economics of cultivating *Kappaphycus alvarezii* using the fixed-bottom line and hanging-long line methods in Panagatan Cays, Caluya, Antique, Philippines 105–109
Mingxin Guo, P.J. Harrison, F.J.R. Taylor / Fish kills related to *Prymnesium parvum* N. Carter (Haptophyta) in the People's Republic of China 111–117
A. Vonshak, N. Kancharaksa, B. Bunnag & M. Tanticharoen / Role of light and photosynthesis on the acclimation process of the cyanobacterium *Spirulina platensis* to salinity stress 119–124
D.F. Kapraun, J. Lopez-Bautista, G. Trono & K.T. Bird / Quantification and characterization of nuclear genomes in commercial red seaweeds (Gracilariales) from the Philippines 125–130
M. del Pilar Sánchez-Saavedra & D. Voltolina / Effect of blue-green light on growth rate and chemical composition of three diatoms 131–137
Hu Qiang & A. Richmond / Productivity and photosynthetic efficiency of *Spirulina platensis* as affected by light intensity, algal density and rate of mixing in a flat plate photobioreactor 139–145
N. Bourgougnon, M. Lahaye, B. Quemener, M. Cormaci, G. Furnari & J.-M. Kornprobst / Chemical structure analysis of water-soluble sulfated polysaccharide from *Schizymenia dubyi* (Rhodophyta, Gigartinales) 147–153
N. Bourgougnon, M. Lahaye, B. Quemener, J.-C. Chermann, M. Rimbert, M. Cormaci, G. Furnari & J.-M. Kornprobst / Annual variation in composition and *in vitro* anti-HIV-1 activity of the sulfated glucoronoglactan from *Schizymenia dubyi* (Rhodophyta, Gigartinales) 155–161
Yuan-Kun Lee, Sun-Yeun Ding, Chye-Hock Hoe & Chin-Seng Low / Mixotrophic growth of *Chlorella sorokiniana* in outdoor enclosed photobioreactor 163–169
C. Wilhelm, R. Conrad, L. Meitzler & A. Mühlenweg / Combination of solid phase extraction and a microalgal test system based on pulse-amplitude modulated fluorescence to detect photosystem 11 herbicides up to 0.05 μeq l^{-1} 171–173
Book reviews 175–177
Announcements 179

Vol. 8 No. 3 1996

Qingyu Wu, Bing Zhang & N.G. Grant / High yield of hydrocarbon gases resulting from pyrolysis of yellow heterotrophic and bacterially degraded *Chlorella protothecoides* 181–184
I. Meneses / Assessment of populations of *Gracilaria chilensis* (Gracilariales, Rhodophyta) utilizing RAPDs 185–192
S. Lefebvre, J. Hussenot & N. Brossard / Water treatment of land-based fish farm effluents by outdoor culture of marine diatoms 193–200
Yan Xiaojun, Li Xiancui, Zhou Chengxu & Fan Xiao / Prevention of fish oil rancidity by phlorotannins from *Sargassum kjellmanianum* 201–203
J.G. Day & I.D. McCulloch / Algae on the internet 205–210
E. Tyihák, G. Blunden, Ming-he Yang, T.A. Crabb & É. Sárdi / Formaldehyde, as its dimedone adduct, from *Ascophyllum nodosum* 211–215
E. Leskinen / Effect of ammonium load on the growth of attached microalgae in the northern Baltic Sea 217–227

D.F. Kapraun, J. Lopez-Bautista & K.T. Bird / DNA base composition heterogeneity in some agarophytes (Gracilariales, Rhodophyta) from Mexico and the Philippines 229–237
Y. Freile-Pelegrín, D. Robledo, R. Armisén & G. García-Reina / Seasonal changes in agar characterstics of two populations of *Pterocladia capillacea* in Gran Canaria, Spain 239–246
Y.-K. Hong, S.-K. Kim, K.J. Ihn, M. Polne-Fuller & A. Gibor / Effect of LiCl on compression and tension properties of *Porphyra perforata* tissue 247–252
M.A. Borowitzka / Patents 253–258
Erratum
V. Tragut, J. Xiao, E.J. Bylina & D. Borthakur / Characterization of DNA restriction-modification systems in *Spirulina platensis* strain pacifica 259
Announcements

Vol. 8 Nos. 4–5 1996

OPPORTUNITIES FROM MICRO- AND MACROALGAE
Proceedings of the 7th International Conference of the
International Association of Applied Algology,
Knysna, South Africa, 16–19 April 1996
Guest editors: J.U. Grobbelaar, B.M.A. Kroon, B.A. Whitton

J.U. Grobbelaar, B.A. Whitton & B.M.A. Kroon / Preface 261
W. Vermaas / Molecular genetics of the cyanobacterium *Synechocystis* sp. PCC 6803: Principles and possible biotechnology applications 263–273
R. De Philippis, C. Sili & M. Vincenzini / Response of an exopolysaccharide-producing heterocystous cyanobacterium to changes in metabolic carbon flux 275–281
G. Torzillo, P. Accolla, E. Pinzani & J. Masojídek / *In situ* monitoring of chlorophyll fluorescence to assess the synergistic effect of low temperature and high irradiance stresses in *Spirulina* cultures grown outdoors in photobioreactors 283–291
G.C. Zittelli, V. Tomasello, E. Pinzani & M.R. Tredici / Outdoor cultivation of *Arthrospira platensis* during autumn and winter in temperate climates 293–301
A. Belay, T. Kato & Y. Ota / *Spirulina (Arthrospira)*: potential application as an animal feed supplement 303–311
B.M.A. Kroon & N.A. Dijkman / Photosystem II quantum yields, off-line measured P/I parameters and carbohydrate dynamics in *Chlorella vulgaris* grown under a fluctuating light regime and its application for optimizing mass cultures 313–323
L. Nedbal, V. Tichý, Fusheng Xiong & J.U. Grobbelaar / Microscopic green algae and cyanobacteria in high-frequency intermittent light 325–333
J.U. Grobbelaar, L. Nedbal & V. Tichý / Influence of high frequency light/dark fluctuations on photosynthetic characteristics of microalgae photoacclimated to different light intensities and implications for mass algal cultivation 335–343
N.T. Eriksen, T. Geest & J.J. Løsnmann Iversen / Phototrophic growth in the lunostat: a photo-bioreactor with on-line optimization of light intensity 345–352
K. Lívanský & J. Doucha / CO_2 and O_2 gas exchange in outdoor thin-layer high density microalgal cultures 353–358

E. Molina Grima, A. Robles Medina, A. Giménez Giménez & M.J. Ibáñez González / Gram-scale purification of eicosapentaenoic acid (EPA, 20:5n-3) from wet *Phaeodactylum tricornutum* UTEX 640 biomass 359–367

E. Molina Grima, J.A. Sánchez Pérez, F. García Camacho, J.M. Fernández Sevilla & F.G. Acién Fernández / Productivity analysis of outdoor chemostat culture in tubular air-lift photobioreactors 369–380

A. Richmond / Efficient utilization of high irradiance for production of photoautotropic cell mass: a survey 381–387

Wan-Loy Chu, Siew-Moi Phang & Swee-Hock Goh / Environmental effects on growth and biochemical composition *Nitzschia inconspicua* Grunow 389–396

M. Kawachi, M. Katoh, H. Ikemoto & S. Miyachi / Fatty acid composition of a new marine picoplankton species of the Chromophyta 397–401

B. Butow, D. Wynne & E. Tel-Or / Seasonal and environmental influences on antioxidative protection in *Peridinium gatunense* in Lake Kinneret 403–407

A.E. Jaffray & V.E. Coyne / Development of an *in situ* assay to detect bacterial pathogens of the red alga *Gracilaria gracilis* (Stackhouse) Steentoft, Irvine et Farnham 409–414

Y. Gonen-Zurgil, Y. Carmeli-Schwartz & A. Sukenik / Selective effect of the herbicide DCMU on unicellular algae – a potential tool to maintain monoalgal mass culture of *Nannochloropsis* 415–419

R.J. Anderson, G.J. Levitt & A. Share / Experimental investigations for the mariculture of *Gracilaria* in Saldanha Bay, South Africa 421–430

M. Ohno, H.Q. Nang & S. Hirase / Cultivation and carrageenan yield and quality of *Kappaphycus alvarezii* in the waters of Vietnam 431–437

Abstracts of papers presented at the 7th IAAA Conference 439–464

Vol. 8 No. 6 1996/1997

D.F. Kapraun & J. Lopez-Bautista / Karyology, nuclear genome quantification and characterization of the carrageenophytes *Eucheuma* and *Kappaphycus* (Gigartinales) 465–471

A.J. Smit, B.L. Robertson & D.R. du Preez / Influence of ammonium-N pulse concentrations and frequency, tank condition and nitrogen starvation on growth rate and biochemical composition of *Gracilaria gracilis* 473–481

M.U. Patwary & J.P. van der Meer / Construction of backcrossed *Gelidium* male-sterile and male-fertile lines and their growth comparison 483–486

K. Yamaguchi / Recent advances in microalgal bioscience in Japan, with special reference to utilization of biomass and metabolites: a review 487–502

W.A. Stirk & J. Van Staden / Comparison of cytokinin- and auxin-like activity in some commercially used seaweed extracts 503–508

T. Suzuki, T. Mitsuya, M. Imai & M. Yamasaki / DSP toxin contents in *Dinophysis fortii* and scallops collected at Mutsu Bay, Japan 509–515

J. Rebello, M. Ohno, H. Ukeda & M. Sawamura / Agar quality of commercial agarophytes from different geographical origins: 1. Physical and rheological properties 517–521

P.J. Cáceres, C.A. Faúndez, B. Matsuhiro & J.A. Vasquez / Carrageenophyte identification by second-derivative Fourier transform infrared spectroscopy 523–527

E. Molina Grima, F. García Camacho, J.A. Sánchez Pérez, F.G. Acién Fernández & J.M. Fernández Sevilla / Growth yield determination in a chemostat culture of the marine microalga *Isochrysis galbana* 529–534

G. Blunden, T. Jenkins & Yan-Wen Liu / Enhanced leaf chlorophyll levels in plants treated with seaweed extract 535–543

A. Radwan, R.J. Willey, G. Davies, A. Fataftah, E.A. Ghabbour & S.A. Jansen / Supercritical fluid CO_2 extraction accelerates isolation of humic acid from live *Pilayella littoralis* (Phaeophyta) 545–551

A. Radwan, G. Davies, A. Fataftah, E.A. Ghabbour, S.A. Jansen & R.J. Willey / Isolation of humic acid from the brown algae *Ascophyllum nodosum, Fucus vesiculosus, Laminaria saccharina* and the marine angiosperm *Zostera marina* 553–562

Gene bulletins

A.K. Vachhani & A. Vonshak / Recombination protein A gene, *recA*, from *Spirulina platensis* IAM-M135 563–564

D.J. Scanlan, J.A. Bourne & N.H. Mann / A putative transcriptional activator of the Crp/Fnr family from the marine cyanobacterium *Synechococcus* sp. WH7803 565–567

Book review 569–570

List of reviewers 571–572

Author index 573–574

Volume contents 575–579